



United States Patent Application Serial No. 10/037,630
Filing Date January 3, 2002
Examiner: Paul D. Marcantoni
Art Unit: 1755
ATTORNEY DOCKET NO. 72425.0105

UNITED STATES PATENT AND TRADEMARK OFFICE

In re the United States Patent Application :
of Applicant: J. Blake Scott :

Serial No.: 10/037,630 :

Examiner: Paul D. Marcantoni

Filing Date: January 3, 2002 :

Group Art Unit: 1755

Priority Date: August 10, 2001 :

For: **INCORPORATION OF DRILLING CUTTINGS
INTO STABLE LOAD-BEARING STRUCTURES**

AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

**AMENDMENT, REQUEST AND FEE TO ADD
TO ORIGINAL ERRONEOUSLY NOT NAMED INVENTORS
IN—NONPROVISIONAL APPLICATION
(37 C.F.R. § 1.48(a))**

CERTIFICATION UNDER 37 C.F.R. § 1.8(a)

I hereby certify that, on the date shown below, this correspondence is being:

- ☒ deposited with the United States Postal Service in an envelope addressed to
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
- ☒ with sufficient postage as first class mail.

John S. Child, Jr.
Signature

Date: October 14, 2004

John S. Child, Jr.

1. This amendment and request is to correct the incorrect original naming of inventors in the declaration under 37 C.F.R. § 1.48(a) as set forth and filed on January 3, 2002.

2. Addition and/or Deletion of Inventors

(check and complete all applicable items)

- ☒ Add the following previously unnamed persons as inventors of this application:

Billy R. Scott

Dallas N. Little

- ☐ Delete the following previously incorrectly named inventor(s)

3. Attachments

Attached is

- ☒ A statement from: *(check items below that apply)*

☒ each person being added as an inventor that the error in inventorship occurred without deceptive intention on his or her part. 37 C.F.R. § 1.48(a)(1).

☐ each person being deleted as an inventor that the error in inventorship occurred without deceptive intention on his or her part. 37 C.F.R. § 1.48(a)(1).

☒ a declaration by each of the actual inventor(s) as required by 37 C.F.R. § 1.63 (or as permitted by §§ 1.42, 1.43, OR 1.47). 37 C.F.R. § 1.48(a)(2).

☐ written assent of the assignee *(if any of the original inventors executed an assignment)* 37 C.F.R. § 1.48(a)(4).

☐ *(check the following item, if all the inventor(s) remaining after this petition and amendment is accepted are not the inventor(s) of the subject matter of all the claim(s) now being claimed.)*

- ☐ Attached is an explanation of the facts, including the ownership of all the claim(s) being claimed in this application, including the ownership of all the claim(s) at the time the last claimed invention was made (Declaration of Inventorship and Common Ownership of Claims in the Application).

4. Fee Payment (37 C.F.R. § 1.17(l)–\$130.00)

The fee required is paid as follows:

☒ Attached is a ☒ check ☐ money order in the amount of \$ 130.00

☒ Authorization is hereby made to charge the amount of \$ _____

☒ to Deposit Account No. 04-1406

☐ to Credit card as shown on the attached credit card information authorization form PTO-2038.

WARNING: Credit card information should **not** be included on this form as it may become public.

☒ Charge any additional fees required by this paper or credit any overpayment in the manner authorized above.

A duplicate of this paper is attached.

John S. Child, Jr.
SIGNATURE OF PRACTITIONER

Reg. No. 28,833

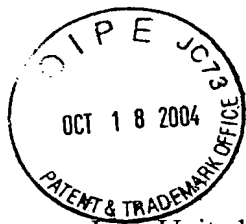
John S. Child, Jr.

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Philadelphia, PA 19103-2307

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000110



UNITED STATES PATENT AND TRADEMARK OFFICE

In re United States Patent Application
of Applicant: J. Blake Scott

Serial No.: 10/037,630

Examiner: Paul D. Marcantoni

Filing Date: January 3, 2002

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Priority Date: August 10, 2001

For: **INCORPORATION OF DRILLING CUTTINGS
INTO STABLE LOAD-BEARING STRUCTURES**

DECLARATION OF J. BLAKE SCOTT

I, J. Blake Scott (also referred to as Jonathan B. Scott), as the named inventor of the subject matter disclosed and claimed in United States Patent Application No. 10/037,630, filed January 3, 2002, I hereby declare as follows:

1. That my residence and post office address are 113 Oak Isle, Longview, Texas, 75605. I am a citizen of the United States of America.
2. That I am more than twenty-one (21) years of age, am competent to make this declaration, and, unless indicated otherwise, have personal knowledge of the facts stated herein.
3. That I am the named inventor of United States Patent Application Serial No. 10/037,630.
4. That I have reviewed the United States Patent Application and believe that Billy R. Scott and Dallas N. Little are inventors or co-inventors of subject matter set forth in at least one of the claims. (A copy of the claims is attached as **EXHIBIT A.**) For that reason, I agree to the

change of inventorship for this application to name Billy R. Scott and Dallas N. Little as co-inventors.

5. Billy R. Scott and Dallas N. Little were identified as co-inventors of United States Patent Application Serial No. 60/311,429, from which United States Patent Application Serial No. 10/037,630 claims priority. I am identified in United States Patent Application Serial No. 60/a311,439 as "Jonathon B. Scott."

I further declare that all statements made herein of my own knowledge are true, and all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: July 30, 2004

J. BLAKE SCOTT

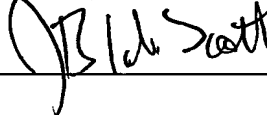
A handwritten signature in black ink, appearing to read "J. Blake Scott", is written over a horizontal line.

EXHIBIT A
Pending Claims 1– 20
(United States Patent Application Serial No. 10/037,630)

Claim 1. A process for constructing load-bearing structures incorporating drilling cuttings, said process comprising operations of:

- (1) forming a particulate mixture comprising drilling cuttings; and
- (2) at least one of groups (2.1) and (2.2) of suboperations, said group (2.1) comprising suboperations of:

- (2.1.1) mixing said particulate mixture comprising drilling cuttings with at least one stabilizer selected from the group consisting of:

- (A) quicklime;
 - (B) hydrated lime;
 - (C) Portland Cement;
 - (D) Class C fly ash;
 - (E) cement kiln dust;
 - (F) lime kiln dust;
 - (G) Class F fly ash; and
 - (H) other pozzolans

- to form a cementitious second mixture (2.1.2) forming said cementitious second mixture into the shape and size of the load-bearing structure; and

- (2.1.3) causing the shaped and sized second mixture formed in suboperation (2.1.2) to undergo a pozzolanic reaction to form said load-bearing structure;

said load-bearing structure having sufficient resistance to rutting that any rut formed in such surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch; and

said group (2.2) comprising suboperations of:

- (2.2.1) mixing said particulate mixture comprising drilling cuttings with at least one of foamed asphalt and emulsified asphalt to form an asphaltic second mixture;

- (2.2.2) forming said asphaltic second mixture into the shape and size of the load-bearing structure; and

- (2.2.3) causing the shaped and sized asphaltic second mixture formed in suboperation (2.2.2) to form the load-bearing structure by curing said shaped asphaltic second mixture.

Claim 2. A process according to claim 1, wherein at least 10 percent by mass of said particulate mixture are deep drilling cuttings that have been generated by a process comprising the following suboperations:

- (1.1) providing drilling means, drilling driving means that cause the drilling means to operate at the bottom of a borehole, and drilling mud; and
- (1.2) causing said drilling driving means to drive said drilling means while said drilling mud flows into and out of said borehole through separate passageways disposed so as to insure that mud pumped into the borehole must reach the near vicinity of the drilling means that is deepening, widening, and/or otherwise increasing the volume of said borehole before the mud can enter any passageway through which a mixture of mud and cuttings flows out of the borehole during drilling, said mixture of mud and cuttings, optionally after removal therefrom of all or part of the constituents of said mixture that are not cuttings, constituting said deep drilling cuttings.

Claim 3. A process according to claim 2, wherein at least part of the deep drilling cuttings have been produced by drilling with a water-containing drilling mud.

Claim 4. A process according to claim 3, said process comprising group (2.1) of suboperations.

Claim 5. A process according to claim 4, wherein said stabilizer is selected from the group consisting of quicklime, hydrated lime, Portland Cement, Class C fly ash, and mixtures of Class C fly ash with Portland Cement.

- Claim 6. A process according to claim 5, wherein:
- said stabilizer is a mixture of Class C fly ash with Portland Cement; and
 - suboperation (2.1.1) is accomplished in two stages, in the first of which Class C fly ash is mixed with said particulate mixture comprising drilling cuttings and in the second of which Portland Cement is mixed into the mixture previously formed by mixing Class C fly ash with said particulate mixture comprising drilling cuttings.

Claim 7. A process according to claim 6, wherein, based on the particulate mixture comprising drilling cuttings to be stabilized:

- the amount of Portland Cement used as a stabilizer is at least 1.0%;
- the amount of Class C fly ash used as a stabilizer is at least 2.0%; and
- the ratio of the amount of Class C fly ash used as a stabilizer to the amount of Portland Cement used as a stabilizer is at least 0.50:1.0 but is not more than 10:1.0.

Claim 8. A process according to claim 2, wherein at least part of the deep drilling cuttings have been produced by drilling with an oil- containing drilling mud.

Claim 9. A process according to claim 8, said process comprising group (2.1) of suboperations.

Claim 10. A process according to claim 9, wherein said stabilizer is selected from the group consisting of quicklime, hydrated lime, Portland Cement, Class C fly ash, fluidized bed fly ash, and mixtures of either Class C or fluidized bed fly ash with Portland Cement.

Claim 11. A process according to claim 10, wherein:

- said stabilizer is a mixture of Class C or fluidized bed fly ash with Portland Cement; and
- suboperation (2.1.1) is accomplished in two stages, in the first of which C fly ash is mixed with said particulate mixture comprising drilling cuttings and in the second of which Portland Cement is mixed into the mixture previously formed by mixing fly ash with said particulate mixture comprising drilling cuttings.

Claim 12. The process according to claim 11, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 13. A process according to claim 10, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 14. A process according to claim 7, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 15. A process according to claim 6, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 16. A process according to claim 5, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 17. A process according to claim 4, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 18. A process according to claim 3, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 19. A process according to claim 2, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 20. A process according to claim 1, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

UNITED STATES PATENT AND TRADEMARK OFFICE

In re United States Patent Application
of Applicant: J. Blake Scott

Serial No.:	10/037,630	:	Examiner:	Paul D. Marcantoni
Filing Date:	January 3, 2002	:	Group Art Unit:	1755
Priority Date:	August 10, 2001	:		

For: **INCORPORATION OF DRILLING CUTTINGS
INTO STABLE LOAD-BEARING STRUCTURES**

DECLARATION OF BILLY R. SCOTT

I, Billy R. Scott, hereby declare as follows:

1. That my residence and post office address are P.O. Box 170, Diana, Texas, 75640.

I am a citizen of the United States of America.

2. That I am more than twenty-one (21) years of age, am competent to make this declaration, and, unless indicated otherwise, have personal knowledge of the facts stated herein.

3. That I am a co-inventor with J. Blake Scott (also referred to as Jonathan B. Scott) and Dallas N. Little of United States Patent Application No. 60/311,439 filed August 10, 2001.

The present Patent Application Serial No. 10/037,630, claims the benefit of the priority of United States Patent Application No. 60/311,439.

4. That I have reviewed the claims in this United States Patent Application and believe that I am an inventor and/or co-inventor of the subject matter set forth in at least one of the claims. (A copy of the claims is attached as **EXHIBIT A.**)

5. That I, the person who is being added as an inventor by the petition being submitted to correct the inventorship of this application, do hereby declare that the inventorship error in failing to include my name as an inventor on this application occurred without any deceptive intention on my part.

I further declare that all statements made herein of my own knowledge are true, and all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: July 30, 2004

BILLY R. SCOTT

A handwritten signature in cursive script that reads "Billy R. Scott". The signature is written in dark ink and is positioned over a horizontal line.

EXHIBIT A
Pending Claims 1– 20
(United States Patent Application Serial No. 10/037,630)

Claim 1. A process for constructing load-bearing structures incorporating drilling cuttings, said process comprising operations of:

- (1) forming a particulate mixture comprising drilling cuttings; and
- (2) at least one of groups (2.1) and (2.2) of suboperations, said group (2.1) comprising suboperations of:

(2.1.1) mixing said particulate mixture comprising drilling cuttings with at least one stabilizer selected from the group consisting of:

- (A) quicklime;
- (B) hydrated lime;
- (C) Portland Cement;
- (D) Class C fly ash;
- (E) cement kiln dust;
- (F) lime kiln dust;
- (G) Class F fly ash; and
- (H) other pozzolans

to form a cementitious second mixture (2.1.2) forming said cementitious second mixture into the shape and size of the load-bearing structure; and

(2.1.3) causing the shaped and sized second mixture formed in suboperation (2.1.2) to undergo a pozzolanic reaction to form said load-bearing structure;

said load-bearing structure having sufficient resistance to rutting that any rut formed in such surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch; and

said group (2.2) comprising suboperations of:

(2.2.1) mixing said particulate mixture comprising drilling cuttings with at least one of foamed asphalt and emulsified asphalt to form an asphaltic second mixture;

(2.2.2) forming said asphaltic second mixture into the shape and size of the load-bearing structure; and

(2.2.3) causing the shaped and sized asphaltic second mixture formed in suboperation (2.2.2) to form the load-bearing structure by curing said shaped asphaltic second mixture.

Claim 2. A process according to claim 1, wherein at least 10 percent by mass of said particulate mixture are deep drilling cuttings that have been generated by a process comprising the following suboperations:

- (1.1) providing drilling means, drilling driving means that cause the drilling means to operate at the bottom of a borehole, and drilling mud; and
- (1.2) causing said drilling driving means to drive said drilling means while said drilling mud flows into and out of said borehole through separate passageways disposed so as to insure that mud pumped into the borehole must reach the near vicinity of the drilling means that is deepening, widening, and/or otherwise increasing the volume of said borehole before the mud can enter any passageway through which a mixture of mud and cuttings flows out of the borehole during drilling, said mixture of mud and cuttings, optionally after removal therefrom of all or part of the constituents of said mixture that are not cuttings, constituting said deep drilling cuttings.

Claim 3. A process according to claim 2, wherein at least part of the deep drilling cuttings have been produced by drilling with a water-containing drilling mud.

Claim 4. A process according to claim 3, said process comprising group (2.1) of suboperations.

Claim 5. A process according to claim 4, wherein said stabilizer is selected from the group consisting of quicklime, hydrated lime, Portland Cement, Class C fly ash, and mixtures of Class C fly ash with Portland Cement.

- Claim 6. A process according to claim 5, wherein:
- said stabilizer is a mixture of Class C fly ash with Portland Cement; and
 - suboperation (2.1.1) is accomplished in two stages, in the first of which Class C fly ash is mixed with said particulate mixture comprising drilling cuttings and in the second of which Portland Cement is mixed into the mixture previously formed by mixing Class C fly ash with said particulate mixture comprising drilling cuttings.

Claim 7. A process according to claim 6, wherein, based on the particulate mixture comprising drilling cuttings to be stabilized:

- the amount of Portland Cement used as a stabilizer is at least 1.0%;
- the amount of Class C fly ash used as a stabilizer is at least 2.0%; and
- the ratio of the amount of Class C fly ash used as a stabilizer to the amount of Portland Cement used as a stabilizer is at least 0.50:1.0 but is not more than 10:1.0.

Claim 8. A process according to claim 2, wherein at least part of the deep drilling cuttings have been produced by drilling with an oil- containing drilling mud.

Claim 9. A process according to claim 8, said process comprising group (2.1) of suboperations.

Claim 10. A process according to claim 9, wherein said stabilizer is selected from the group consisting of quicklime, hydrated lime, Portland Cement, Class C fly ash, fluidized bed fly ash, and mixtures of either Class C or fluidized bed fly ash with Portland Cement.

Claim 11. A process according to claim 10, wherein:

- said stabilizer is a mixture of Class C or fluidized bed fly ash with Portland Cement; and
- suboperation (2.1.1) is accomplished in two stages, in the first of which C fly ash is mixed with said particulate mixture comprising drilling cuttings and in the second of which Portland Cement is mixed into the mixture previously formed by mixing fly ash with said particulate mixture comprising drilling cuttings.

Claim 12. The process according to claim 11, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 13. A process according to claim 10, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 14. A process according to claim 7, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 15. A process according to claim 6, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 16. A process according to claim 5, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 17. A process according to claim 4, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 18. A process according to claim 3, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
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Claim 19. A process according to claim 2, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches of constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 20. A process according to claim 1, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

UNITED STATES PATENT AND TRADEMARK OFFICE

In re United States Patent Application
of Applicant: J. Blake Scott

Serial No.: 10/037,630

Examiner: Paul D. Marcantoni

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Group Art Unit: 1755

Priority Date: August 10, 2001

For: **INCORPORATION OF DRILLING CUTTINGS
INTO STABLE LOAD-BEARING STRUCTURES**

DECLARATION OF DALLAS N. LITTLE

I, Dallas N. Little, hereby declare as follows:

1. That my residence and post office address are 2801 Briar Grove, Bryan, Texas, 77802. I am a citizen of the United States of America.

2. That I am more than twenty-one (21) years of age, am competent to make this declaration, and, unless indicated otherwise, have personal knowledge of the facts stated herein.

3. That I am a co-inventor with J. Blake Scott (also referred to as Jonathan B. Scott) and Billy R. Scott of United States Patent Application No. 60/311,439 filed August 10, 2001.

The present Patent Application Serial No. 10/037,630, claims the benefit of the priority of United States Patent Application No. 60/311,439.

4. That I have reviewed the claims in this United States Patent Application and believe that I am an inventor and/or co-inventor of the subject matter set forth in at least one of the claims. (A copy of the claims is attached as **EXHIBIT A.**)

5. That I, the person who is being added as an inventor by the petition being submitted to correct the inventorship of this application, do hereby declare that the inventorship error in failing to include my name as an inventor on this application occurred without any deceptive intention on my part.

I further declare that all statements made herein of my own knowledge are true, and all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: July 30, 2004

DALLAS N. LITTLE

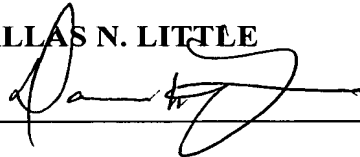
A handwritten signature in black ink, appearing to read 'Dallas N. Little', is written over a horizontal line.

EXHIBIT A
Pending Claims 1– 20
(United States Patent Application Serial No. 10/037,630)

Claim 1. A process for constructing load-bearing structures incorporating drilling cuttings, said process comprising operations of:

- (1) forming a particulate mixture comprising drilling cuttings; and
- (2) at least one of groups (2.1) and (2.2) of suboperations, said group (2.1) comprising suboperations of:

- (2.1.1) mixing said particulate mixture comprising drilling cuttings with at least one stabilizer selected from the group consisting of:

- (A) quicklime;
 - (B) hydrated lime;
 - (C) Portland Cement;
 - (D) Class C fly ash;
 - (E) cement kiln dust;
 - (F) lime kiln dust;
 - (G) Class F fly ash; and
 - (H) other pozzolans

- to form a cementitious second mixture (2.1.2) forming said cementitious second mixture into the shape and size of the load-bearing structure; and

- (2.1.3) causing the shaped and sized second mixture formed in suboperation (2.1.2) to undergo a pozzolanic reaction to form said load-bearing structure;

said load-bearing structure having sufficient resistance to rutting that any rut formed in such surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch; and

said group (2.2) comprising suboperations of:

- (2.2.1) mixing said particulate mixture comprising drilling cuttings with at least one of foamed asphalt and emulsified asphalt to form an asphaltic second mixture;

- (2.2.2) forming said asphaltic second mixture into the shape and size of the load-bearing structure; and

- (2.2.3) causing the shaped and sized asphaltic second mixture formed in suboperation (2.2.2) to form the load-bearing structure by curing said shaped asphaltic second mixture.

Claim 2. A process according to claim 1, wherein at least 10 percent by mass of said particulate mixture are deep drilling cuttings that have been generated by a process comprising the following suboperations:

- (1.1) providing drilling means, drilling driving means that cause the drilling means to operate at the bottom of a borehole, and drilling mud; and
- (1.2) causing said drilling driving means to drive said drilling means while said drilling mud flows into and out of said borehole through separate passageways disposed so as to insure that mud pumped into the borehole must reach the near vicinity of the drilling means that is deepening, widening, and/or otherwise increasing the volume of said borehole before the mud can enter any passageway through which a mixture of mud and cuttings flows out of the borehole during drilling, said mixture of mud and cuttings, optionally after removal therefrom of all or part of the constituents of said mixture that are not cuttings, constituting said deep drilling cuttings.

Claim 3. A process according to claim 2, wherein at least part of the deep drilling cuttings have been produced by drilling with a water-containing drilling mud.

Claim 4. A process according to claim 3, said process comprising group (2.1) of suboperations.

Claim 5. A process according to claim 4, wherein said stabilizer is selected from the group consisting of quicklime, hydrated lime, Portland Cement, Class C fly ash, and mixtures of Class C fly ash with Portland Cement.

- Claim 6. A process according to claim 5, wherein:
- said stabilizer is a mixture of Class C fly ash with Portland Cement; and
 - suboperation (2.1.1) is accomplished in two stages, in the first of which Class C fly ash is mixed with said particulate mixture comprising drilling cuttings and in the second of which Portland Cement is mixed into the mixture previously formed by mixing Class C fly ash with said particulate mixture comprising drilling cuttings.

Claim 7. A process according to claim 6, wherein, based on the particulate mixture comprising drilling cuttings to be stabilized:

- the amount of Portland Cement used as a stabilizer is at least 1.0%;
- the amount of Class C fly ash used as a stabilizer is at least 2.0%; and
- the ratio of the amount of Class C fly ash used as a stabilizer to the amount of Portland Cement used as a stabilizer is at least 0.50:1.0 but is not more than 10:1.0.

Claim 8. A process according to claim 2, wherein at least part of the deep drilling cuttings have been produced by drilling with an oil- containing drilling mud.

Claim 9. A process according to claim 8, said process comprising group (2.1) of suboperations.

Claim 10. A process according to claim 9, wherein said stabilizer is selected from the group consisting of quicklime, hydrated lime, Portland Cement, Class C fly ash, fluidized bed fly ash, and mixtures of either Class C or fluidized bed fly ash with Portland Cement.

Claim 11. A process according to claim 10, wherein:

- said stabilizer is a mixture of Class C or fluidized bed fly ash with Portland Cement; and
- suboperation (2.1.1) is accomplished in two stages, in the first of which C fly ash is mixed with said particulate mixture comprising drilling cuttings and in the second of which Portland Cement is mixed into the mixture previously formed by mixing fly ash with said particulate mixture comprising drilling cuttings.

Claim 12. The process according to claim 11, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 13. A process according to claim 10, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 14. A process according to claim 7, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 15. A process according to claim 6, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 16. A process according to claim 5, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 17. A process according to claim 4, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 18. A process according to claim 3, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 19. A process according to claim 2, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

- at least 8 inches of constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.

Claim 20. A process according to claim 1, wherein said load-bearing structure has an unconfined compressive strength of at least 100 psi and has a thickness of:

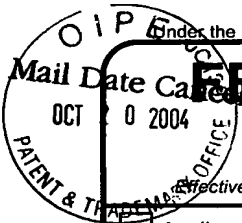
- at least 8 inches if constructed on a subgrade with a resilient modulus that is at least 15.0 kpsi;
- at least 12 inches if constructed on a subgrade with a resilient modulus that is at least 10.0 kpsi but less than 15.0 kpsi; and
- at least 16 inches if constructed on a subgrade with a resilient modulus that is at least 5.0 kpsi but less than 10.0 kpsi.



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Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)**130.00**

Complete if Known

Application Number **10/037,630**
Filing Date **January 3, 2002**
First Named Inventor **J. Blake Scott**
Examiner Name **Paul D. Marcantoni**
Art Unit **1755**
Attorney Docket No. **72425.0105**

METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit
Account
Number
Deposit
Account
Name

04-1406

**Dann Dorfman Herrell and
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The Director is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☒ Credit any overpayments

☒ Charge any additional fee(s) or any underpayment of fee(s)

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	
SUBTOTAL (1)					0

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

		Extra Claims		Fee from below		Fee Paid
Total Claims	<input type="text"/>	-20** =	<input type="text"/>	X	<input type="text"/>	
Independent Claims	<input type="text"/>	-3** =	<input type="text"/>	X	<input type="text"/>	<input type="text"/>
Multiple Dependent					<input type="text"/>	<input type="text"/>

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1202	18	2202	9	Claims in excess of 20	
1201	86	2201	43	Independent claims in excess of 3	
1203	290	2203	145	Multiple dependent claim, if not paid	
1204	86	2204	43	** Reissue independent claims over original patent	
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent	

SUBTOTAL (2) (\$)**0**

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) **Amendment, Request and Fee***

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)**130.00**

SUBMITTED BY

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John S. Child, Jr.	28,833	215-563-4100
Signature	Date	
<i>John S. Child, Jr.</i>	10/14/2004	

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***...To Add To Original Erroneously Not Named Inventors In --Nonprovisional Application (37 C.F.R. 1.48(a))**